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ABM File **Soviet Antimissile System Spurs New U.S. Weapons**

**Improved Nuclear Warheads Designed
to Penetrate Wide Defense Network
—More Sweeping Changes Seen**

By HANSON W. BALDWIN

The development of new nuclear warheads and major changes in United States missile technology are being accelerated partly as a result of the Soviet deployment of anti-ballistic missile installation.

Some officers who have studied intelligence data about the Russians' installations fear that their defensive system may be based on what one described as the "zapp" effect—such as the ray gun in the comic strips—of high altitude nuclear explosions.

The tremendous burst of energy resulting from multi-megaton explosions in the vacuum of space could neutralize or destroy incoming warheads.

It is for this reason that newly designed missile warheads, with improved electrical circuits, better materials and some shielding against the neutron, electromagnetic and thermal effects of a nuclear blast, are being produced.

The annual report of the Atomic Energy Commission, issued a few days ago, mentioned a continuing modification program for "some warheads," with the objective of "further decreasing warhead vulnerability to nuclear environments generated by antiballistic missile countermeasures.

The report's sober statement was regarded as an understatement of the intensive work being done to protect United States warheads and to assure a continuing capability to penetrate Soviet defenses.

But the paucity of accurate information about effects of high-altitude atomic explosions and the atmospheric nuclear test ban that outlaws such developmental tests mean, in the words of one expert, that "there is just no way to know if the solutions are valid."

The beginnings of an even fractionally effective Soviet an-

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PAUL JAMES DUNCAN

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Already in Hanoi

"We have the technology in hand to counter any offensive or defensive force the Soviet Union might bring in the foreseeable future," he has said.



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